



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/965,238

09/27/2001

Michael T. Raftelis

WRN0020

7886

7590

07/28/2005

Garlick & Harrison
P.O. Box 342019
Austin, TX 78734

EXAMINER

AHMED, SALMAN

ART UNIT

PAPER NUMBER

2666

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. **09/965,238**

Applicant(s)

RAFTELIS ET AL.

Examiner

Salman Ahmed

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/27/2001.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 16, 17, 18, 19, 21, 22, 23, 25, 26, 27, 28, 29, 30, 31, 33, 34, 35, 36, 38, 39, 40, 41, 43 and 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Choudhury et al. (US PAT 5933412), hereinafter referred to as Choudhury.

In regards to claims 1, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 16, 19, 21, 23, 25, 26, 27, 28, 29, 30, 31, 33, 34, 35, 36, 38, 41, 43 and 44, Choudhury teaches a method for processing a network manager command in a communication network (column 1 lines

Art Unit: 2666

14 and 15, connection setup method and apparatus), the method comprises the steps of: generating, by a network manager, the network manager command regarding a link between first port and a second port of the network; providing, by the network manager, the network manager command to an affiliated network element (column 3 lines 47-49, an ingress switch, a switch that is connected to an end host that generates the incoming connection setup request message); upon receiving the command, determining, by the affiliated network element, type of network manager command; when the network manager command is establish the link: determining, by the affiliated network element, network path between the first port and the second port via at least one other network element to produce a determined network path (column 6 lines 61-63, the first connection server CS that receives the Setup-connections message determines the route of the connection); generating, by the affiliated network element, a network element command to establish the link between the first and second ports based on the determined network path; providing, by the affiliated network element, the network element command to a first network element of the at least one other network element; determining, by the first network element, link element type of the first network element in the link based on the network element command (column 7, lines 16-19, the first connection server CS then requests the connection server CS in the next domain to set up its segment of the connection); and when the link element type of the first network element a termination link element, allocating, by the first of the first network element network element, resources support the link between the first and second ports (column 6 lines 66-67, column 7 lines 1-2, in the first phase, it requests the switch resource

servers of the switches on the route within its domain to reserve resources for the connection).

In regards to claim 9 and 31, Choudhury teaches in column 9 lines 31-33, that upon completion of the CAC and VPI/VCI selection functions in the reserve-resources phase, each switch resource server asynchronously sends its response to the Reserve-resources message to CS as shown in FIG. 3.

In regards to claims 23 and 31, a processing module and memory are anticipated by figure 1 where we see call processing module and routing table.

In regards to claims 7, 14, 19, 29, 36 and 41, Choudhury teaches (Column 13 lines 44-47) that connection server CS.sub.B completes setup of its segment and returns a Setup-segment response to server CS.sub.A.

In regards to claims 3 and 25, Choudhury teaches (column 9 lines 40-44) that upon receiving the Setup-segment message, the connection server CS.sub.21 determines the route for its segment of the connection. In this example, the segment route consists of switches SW.sub.21, . . . , SW.sub.2m. The two phases for reserving resources and configuring switches are performed.

Art Unit: 2666

In regards to claims 4 and 26, Choudhury teaches (column 6 lines 61-67 and column 7 lines 1-5) that the first connection server CS.sub.11 that receives the Setup-connections message determines the route of the connection as passing through switches in its domain 1 and through domain 2. It establishes the first segment of the connection through switches in its domain using a two-phase message exchange as shown in FIG. 3. In the first phase, it requests the switch resource servers of the switches on the route within its domain to reserve resources for the connection. This phase is executed in parallel at all the switches within this domain through which the connection is routed. Each switch performs connection admission control (CAC) procedures and selects VPI/VCIs

In regards to claims 5, 6, 27 and 28, Choudhury teaches (column 6 lines 67-68 and column 7 lines 1-2) that in the first phase, the connection server requests the switch resource servers of the switches on the route within its domain to reserve resources for the connection. In column 9 lines 1-24 Choudhury teaches that upon completion of the CAC and VPI/VCI selection functions in the reserve-resources phase, each switch resource server asynchronously sends its response to the Reserve-resources message to CS.sub.11 as shown in FIG. 3. Parameters of this response include switch-level QoS guarantees that can be provided by the switch, such as cross-switch delay, and the requested VPI/VCIs. The connection server computes any segment-level QoS parameters. If user QoS specifications for the connection are not violated, the connection server CS.sub.11 forms the Configure-switch messages and sends them in parallel to the switch resource servers as shown in FIG. 3. This VPI/VCI data is

Art Unit: 2666

obtained from the Reserve-resources responses that were received in the previous phase.

In regards to claims 8, 12, 21, 30, 34 and 43, Choudhury teaches (column 5 lines 46-64) that in the network shown in FIG. 2, the functions of setting up, modifying, and releasing a connection are split between two types of servers, connection servers and switch resource servers. Connection servers CS.sub.1p . . . CS.sub.11, CS.sub.2n . . . CS.sub.21, perform route determination, and end-to-end or segment quality of service computation where a segment is defined as a concatenation of channels on a connection. Switch resource servers, such as the servers SRS.sub.11, . . . SRS.sub.1k, SRS.sub.21, . . . and SRS.sub.2m, manage switch resources, such as VPI/VCIs on all the ATM interfaces to the switch, SW.sub.11 . . . SW.sub.1k, SW.sub.21 . . . SW.sub.2m, respectively with which it is associated, link bandwidth, buffer space, and the like and performs fabric control functions to make and clear port/VPI/VCI translation table entries in the switch.

In regards to claims 11 and 33, Choudhury teaches (column 9 lines 31-39) that upon receiving all of these responses, the connection server, CS.sub.11, sends a Setup-segment message to the connection server in the next domain, CS.sub.21, as shown in FIG. 3. The VPI/VCIs selected for the two directions on the ATM interface between switches at the edge of these domains, SW.sub.1k and SW.sub.21, as shown in FIG. 5, are passed as parameters in this message.

In regards to claims 17, 22, 39 and 44, Choudhury teaches (column 8 lines 52-54, in this regard, we assume that the end host A had selected VPI/VCIs on its user-network interface and specified these in the Setup-connections message) of manager command having identity of a network element supporting the ports.

In regards to claims 13, 14, 35 and 36, it is known in the art that when a node receives a tcp/ip or atm packet, if the packet is not intended for that node, it is relayed on to the appropriate node for processing.

In regards to claims 16, 18, 38 and 40, Choudhury teaches (column 3 lines 27-30) that when a signaling request for a connection setup arrives at a switch, it simply consults a routing table that was preloaded by the routing procedure to determine the next switch in the route.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

Art Unit: 2666

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 2, 10, 15, 20, 24, 32, 37 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choudhury et al. (US PAT 5933412), hereinafter referred to as Choudhury as applied to claims 1, 9, 13, 19, 23, 31, 35 and 41 above, and in view of Moore et al. (US PAT 6189046), hereinafter referred to as Moore.

Choudhury teaches of messages being interchanged between nodes to setup connections as described in the rejections of 1, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 16, 17, 18, 19, 21, 22, 23, 25, 26, 27, 28, 29, 30, 31, 33, 34, 35, 36, 38, 39, 40, 41, 43 and 44.

Choudhury does not teach of messages related to connection setup having link criteria having one of quality of service, transmission latencies, privacy and link failure protection.

Moore teaches (column 19 lines 31-39, the apply() call may receive a CallInfo argument or an argument which refers to a CallInfo object. A CallInfo is an object (or a reference to an object) that is a collection of Quality of Service (QoS) parameters.

Art Unit: 2666

Examples of such parameters include performance characteristics (e.g., throughput, latency), rebinding policy, payment mechanism, security policy, quality of protection (e.g., encryption, privacy, authentication, authorization lists), and concurrency policy) that messages between processes being communicated via network connections can have parameters related to quality of service, transmission latencies, privacy and link failure protection.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Choudhury's teaching by incorporating Moore's teaching of having link criteria parameters in the messages. The motivation is that such parameters being passed on through messages will enable receiving node to configure link right away without doing further manipulation and searching. This, in result, will save time during link configuration period.

6. Prior art pertinent to the application but not used in the office action:

Congestion avoidance in high-speed network carrying bursty traffic Goldstein et al.
(US PAT 5029164)

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Salman Ahmed whose telephone number is (571)272-8307. The examiner can normally be reached on 8:30 am - 5:00 pm.

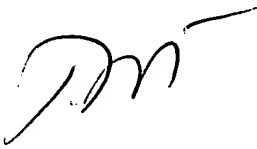
Art Unit: 2666

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571)272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Salman Ahmed
Examiner
Art Unit 2666

SA


DANG TON
PRIMARY EXAMINER